

Engineering Out Systematic Oppression: Disenfranchisement, Discrimination, and Solutions for Election Systems

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Abstract

This comparative analysis reviews literature from the perspective of legal, sociological, political and engineering disciplines. The interdisciplinary approach allows for a holistic examination of what problems persist in commissioning of elections. In many cases, practical engineering considerations are forced to defer to legal precedent. I blend both historical and contemporary issues regarding elections and democracy in the United States, and I trace the failures of the election system to achieve full enfranchisement. I discuss these legal battles in the context of maintaining secure elections. I review technological aspects of elections and various election systems. A newly developed tool, the Perspective On Issues Map, analyzes and illustrates the compendium of these aspects of the voting system in one graphic. Finally, I ask questions for future research.

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Contents

Abstract.....	ii
Acknowledgements	iii
Contents.....	iv
Introduction: Sociology and Democracy	1
Contemporary Legal Battles.....	3
Technical Features of the Election Process	10
Perspectives On Issues Mapping	15
Conclusions: Voting System POIM.....	16
Works Cited	19
Appendix.....	22

Introduction: Sociology and Democracy

Voting is the impetus of a citizen-governed democracy. The voting process is highly complex, expensive, and idiosyncratic, and is a monumental product of the history of democratic and republic governments around the world. In America, that history is no less profound. Whose rights to participate in the process have been recognized? Whose have been barred? What historical patterns seem to vanish, but reify?

“Men are so constituted that they derive their conviction of their own possibilities largely from the estimate formed of them by others. If nothing is expected of a people, that people will find it difficult to contradict that expectation. By depriving us of suffrage, you affirm our incapacity to form an intelligent judgment respecting public men and public measures; you declare before the world that we are unfit to exercise the elective franchise, and by this means lead us to undervalue ourselves, to put a low estimate upon ourselves, and to feel that we have no possibilities like other men.”

Frederick Douglass nails the fundamental issue which has plagued, and still plagues, racial minorities to this day. As conservative action and rhetoric continues to impede the access of our impoverished to the polls, the right of enfranchisement is denied to those who need it most. One of the many pieces that could help advance minority socioeconomic status, and therefore, equity, among the American populace, is complete and full access to this vital right. To understand how this happened in a country that prides itself as a beacon of democracy, we must look backward in time.

Hundreds of years ago, mainstream political perspective gave no voice to most citizens, including women, working men, and slaves. Only if you were a white, property-owning male were you eligible to vote. After the Civil War, the newly-freed slaves from the South were either frequently arrested and put to work, or murdered en masse. Klansmen “poll watchers” terrorized and sometimes killed former slaves who attempted

to vote (Herbert 2016). After the Reconstruction era, Jim Crow laws ensured continued segregation and fear as America grew. Since the passage of the Civil Rights Act in 1964, levels of incarceration have grown dramatically. This “mass incarceration” of Americans was, in large part, spawned by the “War on Drugs” (Massey 2007; Alexander 2012). Many of these Americans are minorities and poor, and particularly, black. The United States is home to nearly a fourth of the world’s prison population, despite comprising only five percent of its total population (DuVernay 2016).

Since it sounds reasonable that a convicted felon has forfeited his or her right to vote, we must be especially wary of the unusual nature of the United States prison system. While all thirty-seven European countries allow felons on probation, on parole, or having fully served time, to vote (Stuart 2002), twenty-nine states do not permit a felon this right, even after serving their full sentence (Massey 2007). Seven million Americans fell under these categories, or were still in the prison system, in 2007 (Alexander 2012), which meant a significant number of people in the United States were unable to vote. Thus, this vulnerable segment of our society “is rendered figuratively ‘invisible’ to policymakers and the public” (Massey 2007).

The consequence of this disenfranchisement should be concerning. If a former prisoner cannot vote, what political incentive is there for a candidate to consider prisoners’ life outcomes? Ideally, we would hope any criminal could find their way back to full citizenry, righteously voting for policies and policy makers they view as helpful in fostering a better government. If an American breaks the law, they ought to be encouraged to pay their debt to society, and the incentive to have a say in our democracy should be a light at the end of their tunnel of imprisonment. While the inconvenient truth may be, we can accompany it with the idea that our correctional institutions prevent the repetition of

crimes. Further, we might expect that our other institutions (e.g. education system, welfare system) help to keep crime rates low. Examining ways to improve these institutions falls beyond the scope of this analysis.

The baggage of a historically racist hegemony continues to impede minorities' participation, directly or indirectly, in the writing and revising of the laws which govern our social contract. Today, that struggle persists under newer, colorblind methods of discrimination. In 2013, members of North Carolina's legislature, for example, opted for "legalized discrimination," via a law requiring would-be voters to provide photo identification (Blake 2013). The new attacks on suffrage have been described as worthy, necessary, and responsible, just as Jim Crow laws were seen by southern whites as necessary to uphold integrity among both whites and blacks. North Carolina's ID law allowed the use of driver's licenses and passports, but not college or state assistance programs (Barnes 2016). It's the same game under a new name.

Contemporary Legal Battles

Let us examine how this modern form of oppression came to operate. The legal history of the United States provides two general perspectives in analyzing discrimination against minority groups: victimization, and perpetration. The latter supposes the problems facing a given minority member, in the court of law, are only legitimate when a specific target or "perpetrator" can be identified as the culprit of injustice. Laws are enacted, which intend to neutralize the wrongdoings of individuals (Freeman 1978). The key word here is "individuals." Such an ideology is remarkably analogous with the notion, in business or industry, of identifying "the root cause" to a defect in a manufacturing process. By this, we mean a single point in a system which is responsible for a bad

outcome. Cutting-edge approaches to workplace cognitive engineering refute the “root cause analysis” for its overt blindness to the legitimacy of entire system. From this perspective, simply removing “bad apples” (e.g., firing the supposedly ill-intentioned worker, replacing a single part of a machine, etc.) is never a solution. Ridden with hindsight bias, retrospective judgments on those who “cause” the accident frame the individual “perpetrator” as the problem, and in doing so, fail to examine the complete system (Dekker 2014). This concept is particularly helpful in assisting the dialogue of our unremitting racial caste system. In contrast to the “perpetrator” identification, a “victim” approach views the conditions which permit victimization as tacitly problematic, rather than innocent. In his article, Freeman continued by suggesting that the “perpetrator” concept embedded in our legislation not only allows policies which perpetuate the harmful status quo, but “creates the class of innocents who need not feel any personal responsibility for the conditions associated with discrimination, and who therefore feel great resentment when called upon to bear any burdens in connection with remedying violations.” Today, we must recognize accusatory language toward the poor as what it truly is: a method to silence certain groups of people in the very moment they wish to speak. The American value of individualism rests at the core of the argument claiming an individual’s personal results and consequences are fully the product of their own control.

Consider the quote of former North Carolina GOP executive committee member Don Yelton, discussing his justification for the 2013 voter-ID law with Aasif Mandvi:

“The law is gonna kick the Democrats in the butt...If it hurts a bunch of college kids that’s too lazy to get up off their bull-honkers and go get a photo ID, so be it. If it hurts the whites, so be it. If it hurts a bunch of lazy blacks that wants to have the government give them everything, so be it.”

These offensive comments not only redact any potential desire to promote the integrity of the election system, but play substantively into the narrative of individualism. In 2006 alone, a study (de Alth 2009) estimated as many as four and a half million Americans were disenfranchised by both photo and non-photo identification voting laws. Interestingly, the quote was a small piece of evidence cited in the 2016 ruling by the 4th Circuit Court of Appeals, deeming the law unconstitutional.

The Voting Rights Act of 1965 was an essential and critical armament for minorities in the fight for suffrage. The Justice Department found proof of racial discrimination in Texas's redistricting plan disputed in *Perez vs. Texas*; the Republican held Texas legislature's defense claimed the plan was intended to help keep Republicans in control, and any effects on minority voters were "incidental." In other words, "Is this about party, or race?" Probably both (Hasen 2014). Unfortunately, important portions of the Voting Rights Act were nullified in 2013 (Liptak 2013). This decision may open the path for an extension of strange, partisan, classist, or racist gerrymandering and redistricting in the future. Another case in Texas, *Veasey vs. Abbott*, was concerned with contentious voter photo identification legislation. Similar to the North Carolina case, acceptable forms of identification would be a driver's license, firearm license, passport, veteran's identification, or a birth certificate, while student, state and local government, and federal government identification would not be accepted (Herbert 2016). Those who attacked the legislation argued that it amounted to blatant discrimination toward not just specific minorities, but groups which are perceived to be less likely to vote Republican. Neither can be acceptable to any person interested in a functioning democracy.

In theory, it would behoove a political party to secure the vote of all groups of people, rather than cheat some of them out of access to the democratic process. But, from

a conflict theorist sociological perspective, we understand that this is expensive, unnecessary, and does not benefit the rich, who heavily control our democratic process. The benefits of a short-term seizure of power has blinded legislatures to the long-term consequence: retaliation, divisiveness, and exacerbated political polarization. Wealth and power are more important than fair democracy, to the elites.

Recent years have witnessed the spread of photo-identification requirements for voting in other states. Each of these are justified as protections against voter fraud. For example, a case from Indiana, *Crawford vs. Marion County Election Board*, held that the plaintiffs could not show that the photo-identification laws were severe in burden to voters. The Court, however, acknowledged there is no evidence of voter fraud, but the basis of their ruling lay in aiding American voters' confidence. Notes from the case reflected a Rasmussen poll indicating that a certain percentage of voters believed some level of fraud existed in the process (Heller 2009). Of course, if actual instances of fraud were rampant, we could justify the implementation of laws that attempt to purify the election process. Americans are indeed rather supportive of a voter photo identification requirement, at eighty-five percent (McCarthy 2016). So, does systematic voter fraud occur? And how detrimental is it to our democracy?

In her 2010 book, *The Myth of Voter Fraud*, Lorraine Minnite explores these questions. She concluded, in one chapter, through an economic calculus, that attempting to commit election fraud on any basis is particularly irrational, suggesting the incentive to cast an illegal ballot, when coupled with the probability of being charged with felony, strongly outweigh any perceived benefit of embarking on fraud for most rational decision makers. Richman (et al. 2014) found that small amounts of non-citizens have registered and are voting in elections. This is the most precarious notion of election fraud in the

United States, because individuals are not forced to disclose citizenship status when registering to vote. Ohio Secretary of State Jon Husted found 385 registered non-citizens, 82 of which voted in the state of Ohio in 2016 elections (Ohio Investigation 2017). Although this does raise questions about the integrity of the elections, Richman claims that voter ID laws do not help to ameliorate the issue.

Voter fraud takes on multiple legal definitions, and these vary from state to state. The opaque nature of the definition leaves room for haphazard scrutiny. From 1994 to 2006, the California Secretary of State: Election Fraud Investigations Unit found that only 83 of 1,600 cases involving potential voting fraud resulted in some type of intentional criminal activity. Of those eighty-three, only twenty-nine were directly related to the voting process, while the others were registration fraud. Additionally, Minnite reviewed a report by the American Center for Voting Rights, a non-profit organization founded in 2005, which has since been dissolved. The report depicted 116 cases of fraud in fifteen states during the 2004 election, which supposedly resulted in almost 300,000 affected votes. She found that only forty-eight of these votes were corroborated by outside sources. Despite the apparent overall lack of evidence showing our elections have been seriously compromised, the constant allegations of rigged elections keep pundits and reporters questioning, and tend to make voter photo identification policies seem reasonable, if not necessary, in the eyes of our high courts (Ansolabehere and Persily 2008; Levitt 2007). Still, it is worth considering the effort expended to scheme a rigged national election. True, politics as usual involves the widespread dissemination of false or misleading information by big-moneyed interests, which influences the decisions of large and potentially decisive blocs of voters (see Mayer 2016, Wilcox and Berry 2009, Levitt 2010). But the possibility of manipulating large numbers of votes by sending unqualified voters

to the polls is highly implausible. Given the differences among cities, states, and localities, and the numerous bureaucracies involved, influencing such a complex and large scale operation would be incredibly expensive and seemingly impossible. While petty voter fraud does seem to take place (e.g. double voting, voting non-citizens), its existence appears infrequent in the grand scheme. Moreover, the potential for manipulative success decreases as the size of the electorate increases. In other words, the higher the stakes of the election, the more difficult it is to corrupt.

Photo-identification requirements or other laws, such as banning early voting, increasing the costs to the polls can unequally impede members of our citizenry. Any given citizen is more likely to vote if the cost to do so is minimized, but the deterring effect of increasing costs is greatest for those with low incomes, physical disabilities, or other impediments. This means those who have a more expensive path to the polls are targeted for disenfranchisement when restrictive policies regarding access are enacted. The elderly, racial and ethnic minorities, and those with limited education are at most risk for political silence (Barreto, Nuño, and Sanchez 2009) through these various requirements. As we have discussed, evidence of impersonation fraud at the poll place is lacking, and most fraud instances involve absentee ballots (Kahn 2012; Fogarty et al. forthcoming). Simply put, poor people or college students may lack the resources to obtain the correct identification for Election Day, and the effective result is discrimination. Given that participation in elections is already so low in the United States, further restrictions seriously impede the efforts to encourage voters to attend the polls.

We must remember that power is distributed throughout the arms of state boards of elections, and the attitudes and behaviors of poll workers at the “street level” can have an important impact on the voting experience. “The positive aspects of street-level

influence can be maximized and the negative aspects minimized when service organizations are designed to engage, rather than mute, street-level worker perspectives on how policy should be implemented (Maynard-Moody 1990).” Enforcement of new rules by poll workers tends to be ambiguous. Atkeson (et al. 2010) explored the hypothesis of a heterogeneous application of a New Mexico voting law. Hispanic male voters were far more likely (92% chance) to be charged with showing identification at the polls, compared with a 69% chance for the median voter. While a verbal testament of name, year of birth, and the last four digits of social security were the minimum requirement, Atkeson found poll workers were not impartial, and specific demographics were profiled practice that was perceived as discriminatory by the affected voters, and that may well undermine their faith in the process. This evidence corroborates the reality that our “street-level bureaucrats” obtain the responsibility therein to create a real level of satisfaction and efficacy among participants in the political process (Claassen 2008). Generating enthusiasm for successful political participation in the public is crucial to our democracy and efforts must be made to refute options that foster a distaste for any group of people. Election board officials must see to the execution of just elections.

To conclude this section, I argue the incredible importance of historical context when we address social issues. A technical solution to a social problem is tricky and nuanced, and thus an understanding of the deep-rooted structural issues embedded in our society is gravely important for successful implementation. While I have touched on some major points of emphasis, this review scratches the surface of the long history of the experiment of democracy. Nonetheless, we can remain optimistic that the efforts of rigorous and technical precision can assist agencies in our pursuit of equity.

Technical Features of the Election Process

Not all of the impediments to voting access are the direct result of deliberate discrimination or restrictive voting legislation. Allen and Bernstein (2006) applied m/m/k queuing theory analysis to 2004 Franklin County, Ohio elections and concluded that increased ballot lengths (which are typically found in highly populated or urban areas) inevitably result in lengthier poll booth times, which in turn cause a longer line at the voting center. Figure 1 illustrates the general process for queuing.

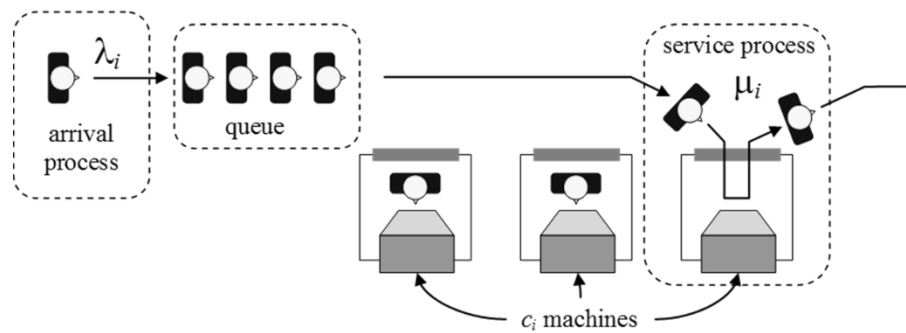


Figure 1. Illustration of Voting Process in m/m/k Queuing Theory (Image Credit: Allen)

Citizens who vote more often are likely to have a faster voting pace than those who do not regularly vote (Stein et al. 2008). The converse effect is an increase of average voting process times in high population density areas, especially in an election of higher turnout than normal. Indeed, Allen (2013) estimates that in central Florida, in November of 2012, nearly 50,000 potential voters were deterred by long lines. Many pieces of research have investigated the one-day resource-allocation problem, because of its complexity. Deploying voting machines is an operational feat because of the unpredictable nature of voter turnout and policy changes. See Yang (et al. 2013) for recommendations made on the idea of same day transports of voting machines; that is, to

transport the machine from one polling place to another based on shifts in demand expectations.

In the 2012 election Sandoval County, New Mexico, a misallocation of voting booths was detrimental. Extremely long lines plagued the Rio Rancho area. Republican voters were effectively disenfranchised. Using methods like those of Allen and Bernstein, Huang calculated that multiple Republican candidates were blocked from office via disenfranchisement of many deterred potential voters, with very high probability. *Fleming vs. Gutierrez* resulted from this debacle, in which an injunction ordering compliance with allocation solutions was ordered for 2014 (Huang 2016).

Ted Allen was consulted by the Franklin County Board of Elections for the 2016 elections. Huang's Indifference-Zone Generalized Binary Search (IZGBS) software was used an optimal allocation of resources (poll workers and voting machines) for the previous election in Franklin County, Ohio. This election was rather successful, but mostly because of the large amount of early voting. To cultivate up-to-date data on voting times for the model parameter, Ted Allen and I sat in the Franklin County Board of Elections to observe early voters. We observed the times that specific voters cast their ballots. This process, coupled with a regression on the file size of the ballots (a precise proxy for the length of the ballot) led us to estimate a voting time parameter of 12 seconds per item on the ballot. Figure 2 shows these results, which were used in his analysis and recommendation. This process was able to ensure a waiting time of under eighty minutes, given a worst-case voter turn-out or non-steady state arrival rate situation.

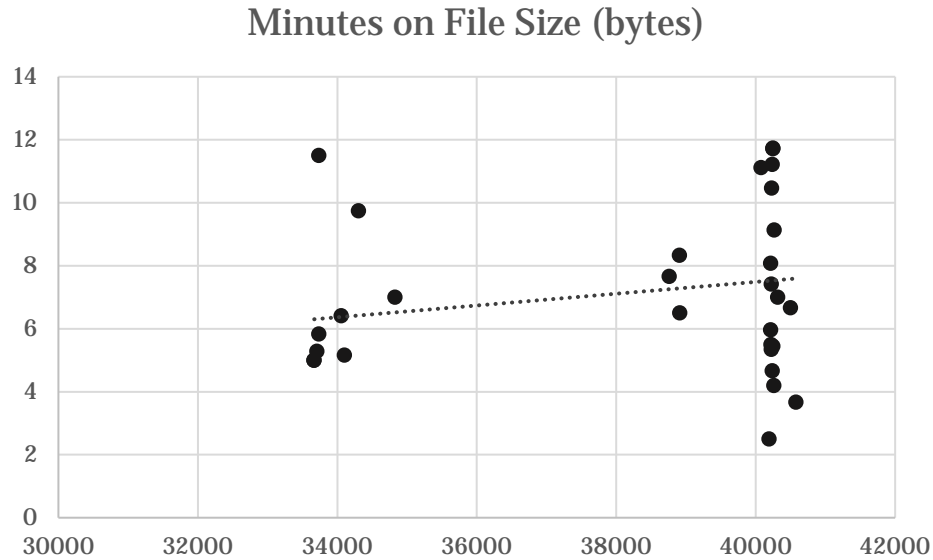


Figure 2. Random Sample of Vote Times from Early Vote Center

A surprising finding revealed that the presence of experienced poll workers was correlated with slower poll processing times. One explanation might be that these workers feel more relaxed throughout the Election Day, or they may be confused about enforcing a new policy or procedure (Spencer and Markovits 2010). When legislatures do not allow early voting, or heavily restrict it, parameter is (intuitively) clogged and makes the sufficient allocation of machines very expensive or unattainable.

The poll process (or service) parameter is also strongly affected by the usability of the voting machine. Many recommendations have been made to help with this issue. The infamous 2000 election with the “hanging chads” outlawed the punch card system. Particularly, the drop-off rate (also described as the “residual”) is much lower with Direct Recording Equipment (DRE) machines (Tomz 2003, Kimball 2008). To explain, a residual ballot does not contain a vote for each race listed in the ballot. Also, the design aspects of the older punch card system tended to have unintended effects of disenfranchisement (Roth 1998). Americans with Disabilities Act compliance is a must

for election systems to achieve state certification. A voting machine's touch screen that mirrors human heuristics is highly navigable. Training poll workers to quickly coach voters on the proper use of a voting machine cannot replace the effectiveness of a well-designed interface.

The Help America Vote Act of 2002 was a major expenditure by the U.S. Federal Government and required state compliance with many aspects of integrity-driven elections. Specifically, it mandated and invested in the optical scan vote counting system and the DRE voting machines that central Ohioans use today (Damschroder 2013). The DRE machines record the vote onto a voter-verified paper audit trail (VVPAT), which generate the legally representative paper trails. Some vulnerabilities have been shown with DREs, such as tampered screen calibrations (Antonyan et al. 2009) and potential capacity for a machine to be afflicted with malware (Aviv et al. 2008). Internal procedures, such as multi-party access to physical locations of vote machines, ballot counting rooms, data access, and storage areas help create an environment of security at the Franklin County Board of Elections (Leonard and Payne 2017).

The usability of the machine is intrinsically linked to voters' confidence in the election system. Claassen (et al. 2013) and Everett (et al. 2008) found contradictory results in voter confidence based on system type (machine or paper). Research on the usability of these systems is rampant (see Byrne et al. 2007, Norden et al. 2006, Bederson et al. 2003). Remote electronic voting options (voting with a cell phone) appear to be surfacing (Yao et al. 2006), although there is much greater fear of corruption in this space.

As discussed, DRE machines utilize the VVPAT for security. Rezende (2004) proposed voter-verifiable systems, in which any random voter would act as an auditing agent. Acemyan (et al. 2014), Volkamer, and Olembo (2013) describe these as "end-to-

end” (e2e) voting systems. Future research could examine whether something like this could work as an all-electronic or mobile voting option. Maybe an extension of this involves a random subset of voters which verify their own and a selection of, say, three of their own friends’ votes within their corner of the local election. Cryptographic and mathematical methods appear to be of potential use for the implementation of e-voting. These fall beyond the scope of this analysis.

Why must we show up to a polling location on Election Day? The state of Oregon implemented a full, 100% vote by mail system in 1981 for local contests (Magleby 1987). Southwell (2004) found overwhelming support for the measure just five years after. 1998 petition by the League of Women voters. Oregon has run elections as vote by mail ever since. Concerns about the security of these elections, frankly, do not come close to rejecting the obvious convenience of this system (Southwell 2016). Even if folks are weary of voting by mail, hybrid systems (part mail and part vote center) could increase acceptability.

Australian elections are mandatory for their citizens. If the goal of a nation’s democracy is to maintain full participation, this is an effective way to do it. This system does, however, breed party stability (Mackerras and McAllister 1999). Possibly contrary to the imagination of the American reader, representation systems extend beyond that of winner-take-all. Plurality/Majority election systems are just that. However, Proportional Representation systems are based on party. Individuals vote for a party and then a predetermined set number of representatives are awarded positions based on the percentage of the vote gained. These systems tend to create atmospheres where women are placed in power, occurring more often than in individual winner-take-all elections

(Paxton et al. 2007). Other systems exist, such as Rank Voting (recently adopted by Maine) and Mixed Systems (Reynolds 2005).

Perspectives On Issues Mapping

Many tools and methods have been created by operations researchers and business-oriented academic disciplines to assist in the systems management and process improvement of products and services. Decision analysis, DMAIC (Define, Measure, Analyze, Improve, Control), Quality Function Deployment, Nominal Group Technique, Control Charting, Delphi Technique, Lean and 6 σ are a non-exhaustive list of these tools. Only some of these tools are helpful when attempting to decipher a selection when the options are mostly qualitative. For example, a decision analysis can aid when selecting from qualitative options, but the options must be in an ordinal rank. Quality Function Deployment helps to identify qualitative features in product or service development, but works best with processes that occur repetitively, usually a daily production or service schedule. These are usually most applicable in private sector settings with competing firms. Because of these deficiencies, Ted Allen, others, and I completed an analysis for decision making problems in the context of military technology acquisition using a new framework. This same framework will be discussed here.

A Perspectives On Issues Map (POIM) can be used in academic setting (as will be demonstrated) or in a day-to-day managerial setting. In both scenarios, the substance of the analysis is displayed in paraphrased form on the map. The map is to be used when deciphering or analyzing between a pair of alternatives. Directions for this method follow.

- Step 1.* Identify (new or revised) issues and metrics/dimensions.
- Step 2.* Reach consensus about the metric (new or revised) values, r_{ij} for each issue i , and dimension j , and the top X quotes or perspectives.
- Step 3.* Plot the top 3 issues excerpting the top X documents below each issue and each alternative. Use a different marking for each course of action associated with a given assume. The dot radius depicts the value of the third dimension next to the issue title (if desired).
- Step 4.* If a dot location has shifted, indicate the change using an arrow.
- Step 5.* As new documents and/or participants stream in, iterate *Steps 1-4*.

To clarify, this process is most useful when deciding between the status-quo and a new method. Its benefits include the maintaining of past points of discussion or critique when new information is introduced. This can be especially helpful when dialog between a manager and subordinates ensues, especially over multiple days, even weeks. This article will feature one POIM, to illustrate my own opinion, which emerged from the preceding research.

Conclusions: Voting System POIM

Figure 3 shows a POIM which is considering moving from pure precinct ballot casting to a hybrid system of precincts and mail in voting. Points on the graph which are black indicate an indifference toward the switch to hybrid, and points with the slanted pattern indicate considerations to a hybrid system. The x-axis indicates whether a given point of information assists with the assertion of social equality. The y-axis indicates whether a given point produces elections that are secure and traceable. Finally, the radii of the points on the POIM indicate the feasibility or likelihood of the realization of the proposed issue. For example, Proportional Representation would likely require a constitutional amendment at the federal level, or a referendum, therefore, its radius is small.

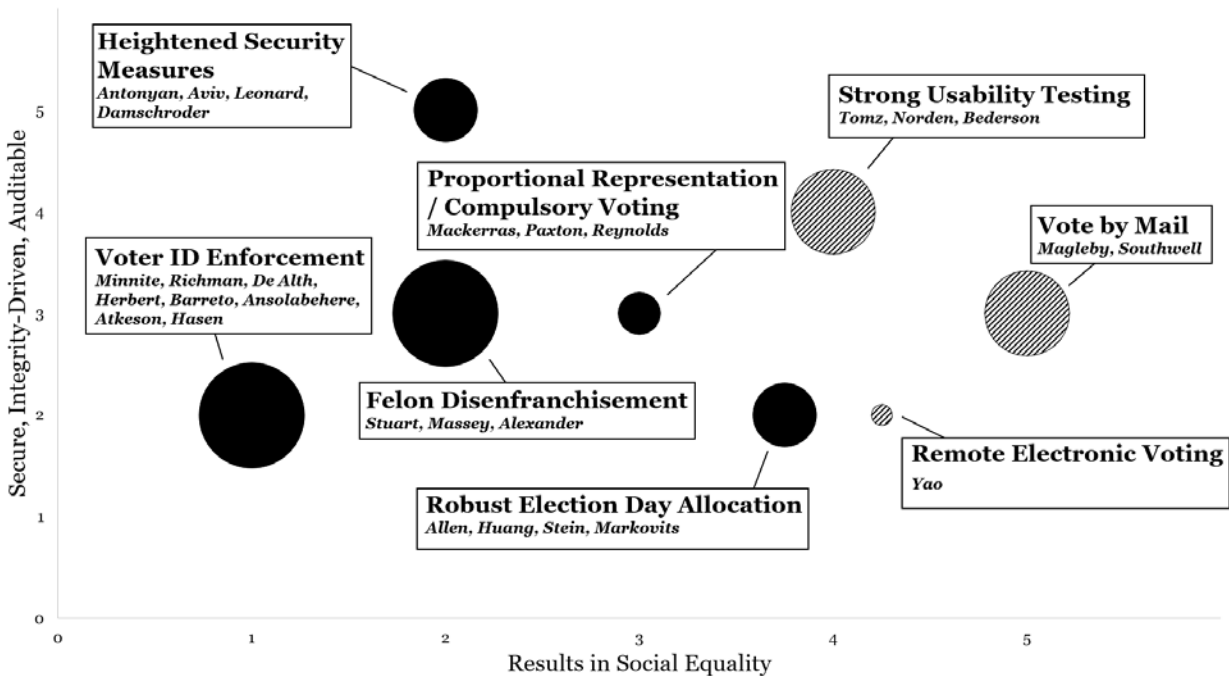


Figure 3. POIM for Voting Systems

Although my knowledge on social movements is limited at this point, I can only speculate: to see major changes in how our democracy can be leveraged to work for all people, both rich and poor, a major social movement is almost a requirement. The form of social movements has shifted dramatically with the advent of the internet, while powerful business interests have monopolized the airways with mainstream news sources. Major shifts in our election system, such as a switch to compulsory voting, or proportional representation, are unlikely in the near term without such movements.

Future research should focus on addressing the social needs of specific communities. Where is voter turnout the lowest? Is mobile-phone voting a potential way to help people vote? What are the security measures necessary to have a web-based voting system? What might be holding the rest of the states back from implementing a full vote-by-mail system? Perhaps there are some cultural considerations: maybe people just enjoy

showing up to cast a ballot. What methods could be used, or are being used, by the power-elite to ensure that vote-by-mail never happens on a national scale?

While collecting data, I thoughtlessly asked an official for the password for wi-fi access at the Franklin County Board of Elections. Of course, the official said no, out of fear that I was attempting to hack their systems. He then retrieved his manager, who also came to question me. While this is no indication that our elections are perfectly secure, I was relieved to find that so much effort was taken to protect the process, after realizing I had no business requesting such information, given this was my first visit for research related purposes. The outcome of this situation bolstered my confidence in our democracy and the people who do the work on the ground to make our elections happen, and I hope that confidence is reflected to the reader.

In interpersonal discussion, arguments can be forgotten or cast aside. This could be due to emotion, absenteeism, or impatience. The POIM allows for constructive dialog, because it allows the facts and reports to be kept on the table for discussion. But it is also simple enough to be understood by all. These strengths make POIMs versatile.

While we submit that our election system stands as the institutional means for self-governing, as I alluded to previously, it cannot be viewed as the sole provider of social change. When the system fails, other methods to demand representation, equality and fair life chances become necessary, when the time and conditions are right. Charles Wright Mills asked us to imagine the wide-ranging situations of others, to constantly put ourselves in the shoes of others. Empathy is the first step toward bringing about the greater good, and seeing to fair, just, and impartial elections.

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Appendix

Table 1. Data Captured for Figure 1

Precinct	Items on Ballot	File Size	Minutes
COLUMBUS 48-E 01	36	40216.00	8.08
COLUMBUS 02-A 01	36	40239.00	4.67
COLUMBUS 02-B 01	36	40228.00	10.47
COLUMBUS 10-E 01	36	40078.00	11.12
COLUMBUS 45-A 01	36	40237.00	11.22
CANAL WINCHESTER-F 01	31	33708.00	5.28
COLUMBUS 19-B 02	37	40501.00	6.67
COLUMBUS 30-B 02	36	40266.00	9.13
COLUMBUS 54-C 01	36	40318.00	7.00
WHITEHALL 04-B 01	31	33735.00	11.50
GAHANNA 3 A 01	40	38906.00	8.33
GROVE CITY 04-F 01	32	34102.00	5.17
GAHANNA 04-E 01	40	38761.00	7.67
GAHANNA 04-D 01	40	38912.00	6.50
DUBLIN 01-C 01	32	34059.00	6.42
COLUMBUS 70-A 01	36	40220.00	5.50
HILLIARD 03-E 01	33	34830.00	7.00
JEFFERSON-D 01	31	33669.00	5.00
JEFFERSON-D 01	31	33669.00	5.00
COLS 18-F 01	36	40261.00	4.20
COLS 56-D 01	36	40578.00	3.67
WHITEHALL 04-B 01	31	33735.00	5.83
Bexley 4-A 01	32	34306.00	9.75
COLS 14-E 01	36	40247.00	5.45
COLS 14-E	36	40247.00	11.73
COLS 14-E	36	40247.00	11.72
COLS 52-C 01	36	40218.00	5.97
COLS 52-F 02	36	40224.00	7.42
COLS 43-C 01	36	40193.00	2.50
COL 12-C 01	36	40226.00	5.35